UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,220	12/19/2000	Philip W. Doberenz	5038-39	7641

20575 7590 12/07/2004

MARGER JOHNSON & MCCOLLOM PC
1030 SW MORRISON STREET
PORTLAND, OR 97205

EXAMINER	
BAYARD, EMMANUEL	
ART UNIT	PAPER NUMBER
2631	

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/741,220	DOBERENZ, PHILIP W.	
	Examiner	Art Unit	
	Emmanuel Bayard	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This is in response to RCE filed on 11/4/04 in which claims 1-15 are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ino U.S. Patent No 5,861,825 in view of Nakyama U.S. patent No 5,8453,684.

Claims 1-15are rejected under 35 U.S.C. 102(b) as being anticipated by Ino U.S. Patent No 5,861, 825.

As per claims 1, 8 and 13, Ino discloses a method for decoding a pair of quadrature signals, the method comprising: a) obtaining a first sample (see col.4, lines 40, 45 and col.5, lines 30, 35); b) determining a last direction and a last state using the first sample (col.4, lines 20-67 and col.5, lines 10-67); c) obtaining a second sample, wherein a current state is determined using the second sample (see col.4, lines 47, 56 and col.5, lines 42, 53; d) generating an output responsive to the last sample, a last direction and their current state (see col.4, lines 14-15 and col.5, lines 5-6 and col.8, lines 3-5).

However Ino does not teach obtaining a first sampling and determining a last object direction from a moving object.

Nakyama I teaches sampling and determining a last object direction from a moving object (see abstract and col.1 lines 15-20, 40-67 and col.3, lines 10-19 and col.4, lines 27-60).

It would have been obvious to one of ordinary skill in the art to implement the teaching of Nakayama into Ino as to detect the position of the moving object based on the corrected waveforms as taught by Nakayama (see col.1, lines 55-59).

As per claim 2, Nakayama teaches the method is performed for an X (horizontal) axis pair and a Y (vertical) axis pair of the object movement as to calculate X axis and Y axis velocity components of relative movement in X axis and Y axis directions of the sampled objects (see figs.5-6). Furthermore implementing such teaching into Ino would have been obvious to one skilled in the art as to detect the position of the moving object based on the corrected waveforms as taught by Nakayama (see col.1, lines 55-59).

As per claim 3, Ino teaches a memory table is considered as the claimed (looking up) the output in a positive look-up table if the direction is positive; an a memory table is considered as the claimed (looking up) the output in a negative look-up table if the direction is negative (see figs. 2-3, 7-9 and col.6, lines 63-65 and col.11, lines 40-55 and col.16, lines 45-53 and col.17, lines 30-35). Furthermore implementing such teaching using the object direction of Nakayama would have been obvious to one skilled in the art as to detect the position of the moving object based on the corrected waveforms as taught by Nakayama (see col.1, lines 55-59).

As per claim 4, Ino teaches quadrature signals generated by a user input device (see col.5, lines 5-7 and col.6, line 45).

As per claim 5, Ino would include a determining motion and rotation direction from the output to calculate X axis and Y axis velocity components of relative movement in X axis and Y axis directions of the sampled objects as taught by Kai (see col.6, lines 20-35). Furthermore implementing such teaching into Ino would have been obvious to one skilled in the art as to detect the position of the moving object based on the corrected waveforms as taught by Nakayama (see col.1, lines 55-59).

As per claim 6, Ino teaches there are more than one positive look-up tables and more than one negative look-up tables and the selection of a look-up table depends upon a number of states that were skipped (see figs. 2-3, 7-9 and col.6, lines 63-65 and col.11, lines 40-55 and col.16, lines 45-53 and col.17, lines 30-35). Furthermore implementing such teaching using the object direction of Nakayama would have been obvious to one skilled in the art as to detect the position of the moving object based on the corrected waveforms as taught by Nakayama (see col.1, lines 55-59).

As per claim 7, Ino teaches, wherein the method further comprises summing outputs generated during a predetermined period, and transmitting a sum for each axis of movement at the end of the period (see col.8, lines 55-67). Furthermore implementing such teaching using the object direction of Nakayama would have been obvious to one skilled in the art as to detect the position of the moving object based on the corrected waveforms as taught by Nakayama (see col.1, lines 55-59).

As per claim 9, Ino teaches, wherein the method further comprises summing output signals for a predetermined length of time (see col.2, lines 1-7 and col.8, lines 55-67).

As per claim 10, Ino teaches providing an output signal to a magnetic disk is considered as the claimed (host computer) (see col.1, line 19) comprised of a sum of outputs (see col.8, lines 55-67).

As per claim 11, Ino teaches the last direction is one of either positive or negative direction (see figs. 2-3, 7-9 and col.6, lines 63-65 and col.11, lines 40-55 and col.16, lines 45-53 and col.17, lines 30-35). Furthermore implementing such teaching using the object direction of Nakayama would have been obvious to one skilled in the art as to detect the position of the moving object based on the corrected waveforms as taught by Nakayama (see col.1, lines 55-59).

As per claim 12, Ino teaches, wherein different lookup tables are used depending upon the last direction being positive or negative (see figs. 2-3, 7-9 and col.6, lines 63-65 and col.11, lines 40-55 and col.16, lines 45-53 and col.17, lines 30-35). Furthermore implementing such teaching using the object direction of Nakayama would have been obvious to one skilled in the art as to detect the position of the moving object based on the corrected waveforms as taught by Nakayama (see col.1, lines 55-59).

As per claim 14, Ino teaches a computer readable medium (see col.1, lines 18-20) and inherently includes, wherein the software code is contained in a downloadable file.

As per claim 15, Ino teaches, wherein the software code, when executed further results in: a) summation of outputs for a predetermined period of time, thereby creating

a net change sum; (see col.8, lines 55-67) and b) transmitting (see col.8, lines 55-67) the net change sum to a host computer.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nagatsuma et al U.S. patent No 6,285,314 B1 teaches a portable GPS type distance/speed meter.

Burshtein et al U.S. patent No 6,323,727 B1 teaches an apparatus and method for detecting digital FM.

Deering U.S. patent No 6,426,755 B1 teaches a graphics system using sample tags.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (3:PM-10:PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571 272 3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Emmanuel Bayard
Primary Examiner
Art Unit 2631

12/2/04

EMMANUEL BAYARD
PRIMARY EXAMINER